Pipeline Engineer

1965 ANNUAL INDEX FOR VOLUME XXXVII

SUBJECT INDEX

TITLE OF ARTICLE AND AUTHOR	MONTH	Pg
AUTOMATION Advance De-bugging of a Pipeline Control System, Jack T. Woodson	Apr.	57
Ask the Talking Unit	Feb.	57
Automating Compressor Operating Curves, D. P. Johnson	Apr.	62
Central Supervisory Control for Algerian Line, John Bishop	Apr.	67
Colossal Colonial...A Yard-Wide Milestone, Richard Martin	July	22
Microwave for Pemex Pipelines, Frank H. Love	Aug.	36
New Tools for Pipeline Engineers (MICA), Richard Martin	Apr.	14
Programed Automatic Product Cuts Now a Reality, Francis F. Shamp	Oct.	48
Solution to Liquid Level Telemetering Problem, Carl C. Taylor	Apr.	60
BARGES Blue Dolphin---Offshore Texas Milestone, Pete Chambers	Oct.	40
First Lay-Barge Microwire-CO_2 Welded Pipeline, Dave Mistrot	Nov.	68
CATHODIC PROTECTION Cathodic Rectifiers Checked by Radio	Sept.	58
COMMUNICATIONS Central Supervisory Control for Algerian Line, John Bishop	Apr.	67
Microwave for Pemex Pipelines, Frank H. Love	Aug.	36
Multi-Channel Loading, R. S. Caplan & W. S. Bauer	Apr.	44
United Gas Introduces Second Generation Microwave, C. W. Evans & Peter G. Smee	Apr.	52
COMPRESSORS, GAS Argentina's Third Major Gas Line, Jos. A. Kornfeld	Sept.	40
Automating Compressor Operating Curves, D. P. Johnson	Apr.	62
Compressor on Wheels, John H. Johnson, Jr.	Feb.	42
Engineered Design Brings Compressor Cost Down, Wm. Bland Osborn	Dec.	43
4200-Hp Compressor Station in Four Days, Dave Mistrot	May	42
How to Keep Compressor Units on Level Footing	Dec.	50
Low Ash Lubricating Oil, J. D. Brady & J. F. Dixon	Aug.	49
Truck-Mounted Equipment Tests Relief Valves	May	69
COMPUTERS Analog Computer Center Considered for Western Europe	Aug.	58
Automating Compressor Operating Curves, D. P. Johnson	Apr.	62
CONSTRUCTION		
Applications of Airborne Infra-Red Systems, Frank E. Kinsman	Oct.	44
Aramco Lays Pipe to Sea Island	Dec.	58
Argentina's Third Major Gas Line, Jos. A. Kornfeld	Sept.	40
Australia's First Pipeline Now Operating	Jan.	54
Basis of Kaneb's Northward Expansion, Dave Mistrot	Nov.	78
Blue Dolphin---Offshore Texas Milestone, Pete Chambers	Oct.	40
Canadian Construction Heavy in Small Diameters, Leslie Orr Rowland	Nov.	60
Colossal Colonial...A Yard-Wide Milestone, Richard Martin	July	22
Delhi-Santos to Build Australian Gas Line	Jan.	58
Expansion Program is Right on Schedule, Dave Mistrot	Dec.	54
First Lay-Barge Microwire-CO_2 Welded Pipeline, Dave Mistrot	Nov.	68
First Natural Gas System for Belgium, Jos. A. Kornfeld	Feb.	98
Gas Line Construction Costs Down, Stations Up	June	80
Gasunie Sets New European Pipelaying Record, Jos. A. Kornfeld	June	50
Gasunie's Toughest Pipelaying Job, Jos. A. Kornfeld	Nov.	72
How to Design Pipeline for Negative Buoyancy, Jose P. Alvim	Dec.	48
In Europe Pipelines Replacing Old Modes, Rene de la Roussiere	June	82
International Contractors Section	June	62
It Costs More to Build Pipelines in Europe	Nov.	64
Logger-Head Pipelining, Ray Day	May	34
Pipeline Goes Over Andes Successfully, E. F. Fulkerson	June	56
Pipeline Outlet for Oman, Jos. A. Kornfeld	Jan	57
Pipeline Over Italy's Apennines Mountains, L. E. Anderson & R. R. Aune	June	47
Pipeline Planning for Western Europe, R. J. Schaeffer	Nov.	53
Pipeliners Built 21,342 Miles in 1965, Frank H. Love	Nov.	43
Pipelines on Traffic Bridges, Part 1, C. B. Archibald	Feb.	58
Pipelines on Traffic Bridges, Part 2, C. B. Archibald	May	48
Plantation Meets the Challenge, Frank H. Love	May	38
Shell Learns How to Transport Heavy Oils, N. L. Thomas	June	60
Short Line, Unusual Problems	Jan.	62
Sirtica's Libyan Pipeline, Jos. A. Kornfeld	Feb.	50
State Licensing Requirements Vary Widely, Dean Hale	May	46
Trans-Alpine---A Key Pipeline for Western Europe	Aug.	40
Underwater Hot Tapping Technique, D. J. Berard & E. S. Smith	Feb.	46
CONTINUOUS TABLES API and Baume Gravity Tables and Weight Factors	Nov.	85
Brake Horsepower Required for Pumping	Feb.	55
Converting Units by Multiplying	Sept.	71
Current Taken by Electric Motors, Amp.	Dec.	75
Curves for Estimating Volume Change When Blending Volatile Hydrocarbons with Crude Oil	Feb.	53
Decimal Equivalents of Common Fractions	Dec.	76
Flow of Oil in Pipelines	Jan.	41
Nomogram for Estimating Centrifugal Pipeline Compressor Load or Capacity Requirements	May	65
Nomogram for Estimating Peaking Power of Prime Movers	Oct.	75
Nomogram for Estimating Reciprocating Compressor Load or Capacity Requirements	Oct.	73
Physical Constants of Paraffin Hydrocarbons and Other Components of Natural Gas	Apr.	75
Pressure in Pounds Per Square Inch	Apr.	73

TITLE OF ARTICLE AND AUTHOR	MONTH	Pg
Pressure Required to Prevent Storage Evaporation Losses, Psig	Nov.	86
Vapor Pressure Chart	Apr.	74
Volume of Gas Lost in Blowdown of Line	Aug.	51
CONTROLS Advance De-bugging of a Pipeline Control System, Jack T. Woodson	Apr.	57
Ask the Talking Unit	Feb.	57
Central Supervisory Control for Algerian Line, John Bishop	Apr.	67
Colossal Colonial...A Yard-Wide Milestone, Richard Martin	July	22
Programed Automatic Product Cuts Now a Reality, Francis F. Shamp	Oct.	48
CORROSION Cathodic Rectifiers Checked by Radio	Sept.	58
The Peculiar Problem of Aluminum Protection	Jan.	60
DESIGN Colossal Colonial...A Yard-Wide Milestone, Richard Martin	July	22
DISPATCHING Programed Automatic Product Cuts Now a Reality, Francis F. Shamp	Oct.	48
Unique Method of Interface Detection, R. M. Howard & J. E. Knizner	Feb.	38
ECONOMICS Engineered Design Brings Compressor Cost Down, Wm. Bland Osborn	Dec.	43
Gas Line Construction Costs Down, Stations Up	June	80
How to Measure Profitability, S. R. Evans	Sept.	36
ENGINES Give Engine Ignition System Proper Attention, Cecil Grey	Dec.	60
He Found a Better Way to Grease an Engine, Byron E. Ashley	Oct.	54
The Medium Speed Gas Engine, Part 1, Jack H. Gill	Jan.	34
The Medium Speed Gas Engine, Part 2, Jack H. Gill	Feb.	67
GENERAL Pipeline Movement of Bulk Material, Fred L. Smith	Sept.	48
GEOGRAPHIC Aramco Lays Pipe to Sea Island	Dec.	58
Argentina's Third Major Gas Line, Jos. A. Kornfeld	Sept.	40
Australia's First Pipeline Now Operating	Jan.	54
Canadian Construction Heavy in Small Diameters, Leslie Orr Rowland	Nov.	60
Central Supervisory Control for Algerian Line, John Bishop	Apr.	67
Delhi-Santos to Build Australian Gas Line	Jan.	58
First Natural Gas System for Belgium, Jos. A. Kornfeld	Feb.	98
Gasunie Sets New European Pipelaying Record, Jos. A. Kornfeld	June	50
Gasunie's Toughest Pipelaying Job, Jos. A. Kornfeld	Nov.	72
How to Design Pipeline for Negative Buoyancy, Jose P. Alvim	Dec.	48
In Europe Pipelines Replacing Old Modes, Rene de la Roussiere	June	82
International Contractors Section	June	62
It Costs More to Build Pipelines in Europe	Nov.	64
Microwave for Pemex Pipelines, Frank H. Love	Aug.	36
Pipeline Goes Over Andes Successfully, E. F. Fulkerson	June	56
Pipeline Outlet for Oman, Jos. A. Kornfeld	Jan.	57
Pipeline Over Italy's Apennines Mountains, L. E. Anderson & R. R. Aune	June	47
Pipeline Planning for Western Europe, R. J. Schaeffer	Nov.	53
Shell Improves Tanker Discharging Facilities, Jos. A. Kornfeld	June	74
Shell Learns How to Transport Heavy Oils, N. L. Thomas	June	60
Sirtica's Libyan Pipeline, Jos. A. Kornfeld	Feb.	50
World's Largest Crude Oil Tank Farm, Jos. A. Kornfeld	Oct.	62
INSTRUMENTATION Advance De-bugging of a Pipeline Control System, Jack T. Woodson	Apr.	57
Ask the Talking Unit	Feb.	57
Central Supervisory Control for Algerian Line, John Bishop	Apr.	67
Colossal Colonial...A Yard-Wide Milestone, Richard Martin	July	22
Microwave for Pemex Pipelines, Frank H. Love	Aug.	36
New Tools for Pipeline Engineers (MICA), Richard Martin	Apr.	14
Programed Automatic Product Cuts Now a Reality, Francis F. Shamp	Oct.	48
Solution to Liquid Level Telemetering Problem, Carl C. Taylor	Apr.	60
Unique Method of Interface Detection, R. M. Howard & J. E. Knizner	Feb.	38
INTERNATIONAL PIPELINING Aramco Lays Pipe to Sea Island	Dec.	58
Argentina's Third Major Gas Line, Jos. A. Kornfeld	Sept.	40
Australia's First Pipeline Now Operating	Jan.	54
Canadian Construction Heavy in Small Diameters, Leslie Orr Rowland	Nov.	60
Central Supervisory Control for Algerian Line, John Bishop	Apr.	67
Delhi-Santos to Build Australian Gas Line	Jan.	58
First Natural Gas System for Belgium, Jos. A. Kornfeld	Feb.	98
Gasunie Sets New European Pipelaying Record, Jos. A. Kornfeld	June	50
Gasunie's Toughest Pipelaying Job, Jos. A. Kornfeld	Nov.	72
How to Design Pipeline for Negative Buoyancy, Jose P. Alvim	Dec.	48
In Europe Pipelines Replacing Old Modes, Rene de la Roussiere	June	82
International Contractors Section	June	62
It Costs More to Build Pipelines in Europe	Nov.	64
Microwave for Pemex Pipelines, Frank H. Love	Aug.	36
Pipeline Goes Over Andes Successfully, E. F. Fulkerson	June	56
Pipeline Outlet for Oman, Jos. A. Kornfeld	Jan.	57
Pipeline Over Italy's Apennines Mountains, L. E. Anderson & R. R. Aune	June	47
Pipeline Planning for Western Europe, R. J. Schaeffer	Nov.	53
Shell Improves Tanker Discharging Facilities, Jos. A. Kornfeld	June	74
Shell Learns How to Transport Heavy Oils, N. L. Thomas	June	60
Sirtica's Libyan Pipeline, Jos. A. Kornfeld	Feb.	50
World's Largest Crude Oil Tank Farm, Jos. A. Kornfeld	Oct.	62
LINE PIPE Colossal Colonial...A Yard-Wide Milestone Richard Martin	July	22
Future of Pipe Materials and Prime Movers, W. A. Doble	Aug.	45
LUBRICATION He Found a Better Way to Grease an Engine, Byron E. Ashley	Oct.	54
Low Ash Lubricating Oil, J. D. Brady and J. F. Dixon	Aug.	49
MAINTENANCE & REPAIR Applications of Airborne Infra-Red Systems, Frank E. Kinsman	Oct.	44
Give Engine Ignition System Proper Attention, Cecil Grey	Dec.	60
How to Keep Compressor Units on Level Footing	Dec.	50
MAPPING Applications of Airborne Infra-Red Systems, Frank E. Kinsman	Oct.	44
Quads Revolutionize Gas Mapping, Richard C. Redmond	Jan.	67
MEASUREMENT Ask the Talking Unit	Feb.	57
Effect of Entrained Liquids on Measurement of Gas, Frank H. Dotterweich	Apr.	64
Ethylene Measurement by Mass Flowmeter, Harold A. Parker	Oct.	57
Fluid Measurement: Plus or Minus, Gordon W. Swinney	May	56
Solution to Liquid Level Telemetering Problem, Carl C. Taylor	Apr.	60
METERING, GAS Effect of Entrained Liquids on Measurement of Gas, Frank H. Dotterweich	Apr.	64
Ethylene Measurement by Mass Flowmeter, Harold A. Parker	Oct.	57
METERING, OIL Fluid Measurement: Plus or Minus, Gordon W. Swinney	May	56
MICROWAVE Microwave for Pemex Pipelines, Frank H. Love	Aug.	36
Multi-Channel Loading, R. S. Caplan & W. S. Bauer	Apr.	44
United Gas Introduces Second Generation Microwave, C. W. Evans & Peter G. Smee	Apr.	52
OFFSHORE PIPELINES Blue Dolphin---Offshore Texas Milestone, Pete Chambers	Oct.	40
OPERATIONS Automating Compressor Operating Curves, D. P. Johnson	Apr.	62
Harnessing Crankcase Explosions	Feb.	44
Underwater Hot Tapping Technique, D. J. Berard & E. S. Smith	Feb.	46
Unique Method of Interface Detection, R. M. Howard & J. E. Knizner	Feb.	38
OUTLOOK Construction Contractors are Encouraged, Chas. S. Lenoir	Jan.	28
Future Growth of Conventional Crude and Products Pipelines, R. M. Crockett	Aug.	42

TITLE OF ARTICLE AND AUTHOR	MONTH	Pg
Future of Pipe Materials and Prime Movers, W. A. Doble	Aug.	45
Pipelines for Unusual Hydrocarbons, Morgan Martin	Aug.	47
What Can the Industry Look for in Expansion?, Frank H. Love	Jan.	30
What Can We Expect From Washington? E. E. Halmos, Jr.	Jan.	29
PIPELINE FUNDAMENTALS Design of Oil Pump Stations, Part 1, Frank E. Hangs	Jan.	49
Design of Oil Pump Stations, Part 2, Frank E. Hangs	Feb.	74
PIPE PROTECTION Cathodic Rectifiers Checked by Radio	Sept.	58
The Peculiar Problem of Aluminum Protection	Jan.	60
PRIME MOVERS Colossal Colonial...A Yard-Wide Milestone, Richard Martin	July	22
Compressor on Wheels, John H. Johnson, Jr.	Feb.	42
Engineered Design Brings Compressor Cost Down, Wm. Bland Osborn	Dec.	43
4200-Hp Compressor Station in Four Days, Dave Mistrot	May	42
Future of Pipe Materials and Prime Movers, W. A. Doble	Aug.	45
Give Engine Ignition System Proper Attention, Cecil Grey	Dec.	60
Harnessing Crankcase Explosions	Feb.	44
He Found a Better Way to Grease an Engine, Byron E. Ashley	Oct.	54
How to Keep Compressor Units on Level Footing	Dec.	50
The Medium Speed Gas Engine, Part 1, Jack H. Gill	Jan.	34
The Medium Speed Gas Engine, Part 2, Jack H. Gill	Feb.	67
PUMPING EQUIPMENT Colossal Colonial...A Yard-Wide Milestone, Richard Martin	July	22
Design of Oil Pump Stations, Part 1, Frank E. Hangs	Jan.	49
Design of Oil Pump Stations, Part 2, Frank E. Hangs	Feb.	74
4200-Hp Compressor Station in Four Days, Dave Mistrot	May	42
Plantation Meets the Challenge, Frank H. Love	May	38
PUMPING STATIONS Colossal Colonial...A Yard-Wide Milestone, Richard Martin	July	22
Design of Oil Pump Stations, Part 1, Frank E. Hangs	Jan.	49
Design of Oil Pump Stations, Part 2, Frank E. Hangs	Feb.	74
4200-Hp Compressor Station in Four Days, Dave Mistrot	May	42
Plantation Meets the Challenge, Frank H. Love	May	38
REMOTE CONTROL Advance De-bugging of a Pipeline Control System, Jack T. Woodson	Apr.	57
Central Supervisory Control for Algerian Line, John Bishop	Apr.	67
Colossal Colonial...A Yard-Wide Milestone, Richard Martin	July	22
Programed Automatic Product Cuts Now a Reality, Francis F. Shamp	Oct.	48
RIGHT-OF-WAY Colossal Colonial...A Yard-Wide Milestone, Richard Martin	July	22
Logger-Head Pipelining, Ray Day	May	34
RIVER CROSSINGS Pipelines on Traffic Bridges, Part 1, C. B. Archibald	Feb.	58
Pipelines on Traffic Bridges, Part 2, C. B. Archibald	May	48
SAFETY Harnessing Crankcase Explosions	Feb.	44
STATION DESIGN Design of Oil Pump Stations, Part 1, Frank E. Hangs	Jan.	49
Design of Oil Pump Stations, Part 2, Frank E. Hangs	Feb.	74
TANKAGE World's Largest Crude Oil Tank Farm, Jos. A. Kornfeld	Oct.	62
UNDERWATER PIPELINES Aramco Lays Pipe to Sea Island	Dec.	58
Blue Dolphin--Offshore Texas Milestone, Pete Chambers	Oct.	40
First Lay-Barge Microwire CO_2 Welded Pipeline, Dave Mistrot	Nov.	68
How to Design Pipeline for Negative Buoyancy, Jose P. Alvim	Dec.	48
Underwater Hot Tapping Technique, D. J. Berard & E. S. Smith	Feb.	46
VALVES Trends in Valving, Allen F. Rhodes	Sept.	43
Truck-Mounted Equipment Tests Relief Valves	May	69

PIPELINE HANDBOOK

COMMUNICATIONS, CONTROLS, INSTRUMENTATION, ELECTRICAL		
Communications Data	Mar.	95
Controls Check List	Mar.	112
Electrical Data	Mar.	114
Electrical Design of Compressor Stations	Mar.	121
How to Select a Regulator	Mar.	119
How to Solve Regulator Freezing Problems	Mar.	116
Pipeline Controls Data	Mar.	108
Technical DBM Data	Mar.	106
CORROSION CONTROL Anode Performance and Current Requirements	Mar.	166
Asphaltmastic Pipe Chart	Mar.	162
Corrosion Control Methods	Mar.	150
Guide to Protective Coatings	Mar.	144
Quantities for Coating With Primer and Enamel	Mar.	164
Requirements for Coating and Wrapping Pipe	Mar.	164
Requirements for Wrapping Pipe With Polyethylene Tape	Mar.	165
The Electromotive Series	Mar.	143
Types of Corrosion	Mar.	142
DESIGN AND CONSTRUCTION Automatic Roll Welding Procedures	Mar.	31
Chart Streamlines Hazen-Williams Formula	Mar.	34
Cost of Pipeline Construction	Mar.	32
Excavation Tables	Mar.	33
Flange Data	Mar.	36
Manual Position Welding	Mar.	31
Welding Fittings Data	Mar.	37
Working Pressures for Gas Piping	Mar.	19
Working Pressures for Oil Transportation Piping	Mar.	20
Working Pressures of Pipe	Mar.	21
MEASUREMENT Design of Large Volume Gas Measurement Facilities	Mar.	88
Maximum Water Vapor Content	Mar.	82
Orifice Meter Flow Calculations	Mar.	60
Rotary Positive Displacement Meters	Mar.	84
Sizing and Selecting Orifice Meters	Mar.	53
Volume Correction Factors for Petroleum Oils	Mar.	58
OPERATIONS A Centrifugal Compressor Surge Control System	Mar.	128
Control of Surges in Liquid Pipelines	Mar.	132
Electrode Consumed Per Weld	Mar.	137
How to Understand Vehicle Horsepower Ratings	Mar.	139
Resistance of Valves and Fittings to Fluid Flow	Mar.	136
PRIME MOVERS, PUMPS Centrifugal Pump Performance	Mar.	43
Classification of Pumps	Mar.	38
Determining Adiabatic Head	Mar.	44
Piston Displacement	Mar.	42
Pump Equivalents	Mar.	41
Pumps for Trunk Line Stations	Mar.	39
Useful Data for Pump Calculations	Mar.	40
Volume Change Vs. Horsepower Change	Mar.	45
Volumetric Efficiency Vs. Compression Ratio	Mar.	46
STORAGE Average Standing Losses for Cone Roof Tanks	Mar.	49
Average Standing Losses for Floating Roof Tanks	Mar.	50
Pipe Fill Table for Gas	Mar.	52
Sphere Capacity Chart	Mar.	47
Tank Capacity Chart	Mar.	48
Volume of Crude Required to Fill Pipeline	Mar.	51

AUTHOR INDEX

AUTHOR	MONTH
Alvim, Jose P. How to Design Pipeline for Negative Buoyancy	Dec. 48
Anderson, L. E. & R. R. Aune Pipeline Over Italy's Apennines Mountains	June 47
Archibald, C. B. Pipelines on Traffic Bridges, Part 1	Feb. 58
Pipelines on Traffic Bridges, Part 2	May 48
Ashley, Byron E. He Found a Better Way to Grease an Engine	Oct. 54
Aune, R. R. & L. E. Anderson Pipeline Over Italy's Apennines Mountains	June 47
Bauer, W. S. & R. S. Caplan Multi-Channel Loading	Apr. 44
Berard, D. J. & E. S. Smith Underwater Hot Tapping Technique	Feb. 46
Bishop, John Central Supervisory Control for Algerian Line	Apr. 67
Brady, J. D. & J. F. Dixon Low Ash Lubricating Oil	Aug. 49
Caplan, R. S. & W. S. Bauer Multi-Channel Loading	Apr. 44
Chambers, Pete Blue Dolphin--Offshore Texas Milestone	Oct. 40
Crockett, R. M. Future Growth of Conventional Crude and Products Pipelines	Aug. 42
Day, Ray Logger-Head Pipelining	May 34
Dixon, J. R. & J. D. Brady Low Ash Lubricating Oil	Aug. 49
Doble, W. A. Future of Pipe Materials and Prime Movers	Aug. 45
Dotterweich, Frank H. Effect of Entrained Liquids on Measurement of Gas	Apr. 64
Evans, C. W. & Peter G. Smee United Gas Introduces Second Generation Microwave	Apr. 52
Evans, S. R. How to Measure Profitability	Sept. 36
Fulkerson, E. F. Pipeline Goes Over Andes Successfully	June 56
Gill, Jack H. The Medium Speed Gas Engine, Part 1	Jan. 34
The Medium Speed Gas Engine, Part 2	Feb. 67
Grey, Cecil Give Engine Ignition System Proper Attention	Dec. 60
Hale, Dean State Licensing Requirements Vary Widely	May 46
Halmos, E. E., Jr. What Can We Expect From Washington?	Jan. 29
Hangs, Frank E. Design of Oil Pump Stations, Part 1	Jan. 49
Design of Oil Pump Stations, Part 2	Feb. 74
Howard R. M. & J. E. Knizner Unique Method of Interface Detection	Feb. 38
Johnson, D. P. Automating Compressor Operating Curves	Apr. 62
Johnson, John H., Jr. Compressor on Wheels	Feb. 42
Kinsman, Frank E. Applications of Airborne Infra-Red Systems	Oct. 44
Knizner, J. E. & R. M. Howard Unique Method of Interface Detection	Feb. 38
Kornfeld, Jos. A. Argentina's Third Major Gas Line	Sept. 40
First Natural Gas System for Belgium	Feb. 98
Gasunie Sets New European Pipelaying Record	June 50
Gasunie's Toughest Pipelaying Job	Nov. 72
Pipeline Outlet for Oman	Jan. 57
Shell Improves Tanker Discharging Facilities	June 74
Sirtica's Libyan Pipeline	Feb. 50
World's Largest Crude Oil Tank Farm	Oct. 62
Lenoir, Chas. S. Construction Contractors are Encouraged	Jan. 28
Love, Frank H. Microwave for Pemex Pipelines	Aug. 36
Pipeliners Built 21,342 Miles in 1965	Nov. 43
Plantation Meets the Challenge	May 38
What Can the Industry Look for in Expansion?	Jan. 30
Martin, Morgan Pipelines for Unusual Hydrocarbons	Aug. 47
Martin, Richard Colossal Colonial...A Yard-Wide Milestone	July 22
New Tools for Pipeline Engineers (MICA)	Apr. 14
Mistrot, Dave Basis of Kaneb's Northward Expansion	Nov. 78
Expansion Program is Right on Schedule	Dec. 54
First Lay-Barge Microwire-CO_2 Welded Pipeline	Nov. 68
4200-Hp Compressor Station in Four Days	May 42
Osborn, Wm. Bland Engineered Design Brings Compressor Cost Down	Dec. 43
Parker, Harold A. Ethylene Measurement by Mass Flowmeter	Oct. 57
Redmond, Richard C. Quads Revolutionize Gas Mapping	Jan. 67
Rhodes, Allen F. Trends in Valving	Sept. 43
Roussiere, Rene de la In Europe Pipelines Replacing Old Modes	June 82
Rowland, Leslie Orr Canadian Construction Heavy in Small Diameters	Nov. 60
Schaeffer, R. J. Pipeline Planning for Western Europe	Nov. 53
Shamp, Francis F. Programed Automatic Product Cuts Now a Reality	Oct. 48
Smee, Peter G. & C. W. Evans United Gas Introduces Second Generation Microwave	Apr. 52
Smith, E. S. & D. J. Berard Underwater Hot Tapping Technique	Feb. 46
Smith, Fred L. Pipeline Movement of Bulk Material	Sept. 48
Swinney, Gordon W. Fluid Measurement: Plus or Minus	May 56
Taylor, Carl C. Solution to Liquid Level Telemetering Problem	Apr. 60
Thomas, N. L. Shell Learns How to Transport Heavy Oils	June 60
Woodson, Jack T. Advance De-bugging of a Pipeline Control System	Apr. 57